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EXAMINER

MATTIS, JASON E

ART UNIT	PAPER NUMBER
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2416

NOTIFICATION DATE	DELIVERY MODE
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05/20/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/680,957	Applicant(s) ANDRIANTSIFERANA ET AL.	
	Examiner JASON E. MATTIS	Art Unit 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-11,13,14,16-18 and 20-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-11,13,14,16-18 and 20-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the Amendment filed 2/10/09. Due to the claim amendments, the previous rejections under 35 U.S.C. 101 have been withdrawn. Also due to the claim amendments, the previous rejections under 35 U.S.C. 112, second paragraph, have been withdrawn. Claims 2, 7, 12, 15, and 19 have been canceled. Claims 1, 3-6, 8-11, 13, 14, 16-18, and 20-26 are currently pending in the application.

Claim Objections

2. Claims 20, 21, and 26 are objected to because of the following informalities: Each of claim 20, 21, and 26 state "The software of claim 18". Due to a claim amendment, claim 18 is no longer directed towards "software" but is now directed towards "A computer-readable medium". It is recommended that the phrase "The software of claim 18" be changed to "The computer-readable medium of claim 18" in each of claims 20, 21, and 26, such that each of these claims contains consistent language and is directed towards a "computer-readable medium". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-6, 8-11, 13, 14, 16-18, and 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jouppi et al. (U.S. Publication US 2003/0221016 A1) in view of Lundin et al. (U.S. Publication US 2008/0096523 A1).

With respect to claim 1, Jouppi et al. discloses an apparatus for relaying information in a network environment **(See the abstract of Jouppi et al. for reference to subsystem for transmitting data flows in a network)**. Jouppi et al. also discloses a gateway general packet radio service support node, GGSN, operable to establish primary and secondary packet data protocol, PDP, links on behalf of an end user **(See page 1 paragraph 2 and page 3 paragraph 26 of Jouppi et al. for reference to a GGSN establishing both primary and secondary PDP contexts)**. Jouppi et al. further discloses the GGSN communicating traffic pattern information associated with the PDP links to a client services packet gateway, CSPG **(See pages 2-3 paragraph 24 and page 4 paragraph 33 for reference to the GGSN exchanging PDP context information regarding both the primary and secondary contexts with a charging gateway CGF, which is a type of CSPG)**. Jouppi et al. also discloses the traffic pattern information providing data associated with how traffic flows propagation via each

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of the PDP links are to be treated in the network (**See page 4 paragraph 33 of Jouppi et al. for reference to the GGSN exchanging information with the CGF regarding how each of the PDP contexts are to be treated for charging purposes**). Jouppi et al. further discloses the GGSN being operable to relay traffic pattern information associated with the primary and secondary PDP links through one or more control path interfaces to the CSPG (**See page 4 paragraph 33 or Jouppi et al. for reference to GGSN relaying PDP context information through control path interfaces to the CGF**). Jouppi et al. also discloses the CSPG being external to the GGSN and the traffic pattern information allowing the CSPG to provide an associated service (**See pages 2-3 paragraph 24, page 4 paragraph 33, and Figure 1 of Jouppi et al. for reference to the CGF being external to the GGSN and for reference to information provided by the GGSN to the CSPG allowing the CSPG to providing an associated charging service**). While Jouppi et al. does disclose storing the traffic pattern information such that differentiated billing occurs based on each separate PDP context (**See page 4 paragraph 33 of Jouppi et al. for reference to the CGF storing information such that each of the separate PDP contexts are charged in a different way**), Jouppi et al. does not specifically disclose the traffic pattern information specifying a first quality of service for the primary PDP link and a different second quality of service for the secondary PDP link by adding the traffic pattern information into traffic flows communicated through control path interfaces of the GGSN to the CSPG such that the CSPG provides as associated service according to an appropriate quality of service level determined from the traffic pattern information.

With respect to claim 6, Jouppi et al. discloses an apparatus for receiving information in a network environment **(See the abstract of Jouppi et al. for reference to subsystem for receiving data in a network)**. Jouppi et al. also discloses a CSPG operable to receive traffic pattern information from a GGSN **(See pages 2-3 paragraph 24 and page 4 paragraph 33 for reference to the GGSN exchanging PDP context information regarding both the primary and secondary contexts with a charging gateway CGF, which is a type of CSPG)**. Jouppi et al. further discloses the GGSN operable to establish primary and secondary PDP links on behalf of an end user **(See page 1 paragraph 2 and page 3 paragraph 26 of Jouppi et al. for reference to a GGSN establishing both primary and secondary PDP contexts)**. Jouppi et al. also discloses the traffic pattern information providing data associated with how traffic flows propagation via each of the PDP links are to be treated in the network **(See page 4 paragraph 33 of Jouppi et al. for reference to the GGSN exchanging information with the CGF regarding how each of the PDP contexts are to be treated for charging purposes)**. Jouppi et al. further discloses the GGSN being operable to relay traffic pattern information associated with the primary and secondary PDP links through one or more control path interfaces to the CSPG **(See page 4 paragraph 33 or Jouppi et al. for reference to GGSN relaying PDP context information through control path interfaces to the CGF)**. Jouppi et al. also discloses the CSPG being external to the GGSN and the traffic pattern information allowing the CSPG to provide an associated service **(See pages 2-3 paragraph 24, page 4 paragraph 33, and Figure 1 of Jouppi et al. for reference to the CGF being external to the GGSN and for**

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reference to information provided by the GGSN to the CSPG allowing the CSPG to providing an associated charging service). While Jouppi et al. does disclose storing the traffic pattern information such that differentiated billing occurs based on each separate PDP context **(See page 4 paragraph 33 of Jouppi et al. for reference to the CGF storing information such that each of the separate PDP contexts are charged in a different way)**, Jouppi et al. does not specifically disclose the traffic pattern information specifying a first quality of service for the primary PDP link and a different second quality of service for the secondary PDP link by adding the traffic pattern information into traffic flows communicated through control path interfaces of the GGSN to the CSPG such that the CSPG provides as associated service according to an appropriate quality of service level determined from the traffic pattern information.

With respect to claim 11, Jouppi et al. discloses a method for relaying information in a network environment **(See the abstract of Jouppi et al. for reference to method for transmitting data flows in a network)**. Jouppi et al. also discloses establishing primary and secondary PDP links on behalf of an end user **(See page 1 paragraph 2 and page 3 paragraph 26 of Jouppi et al. for reference to a GGSN establishing both primary and secondary PDP contexts)**. Jouppi et al. further discloses communicating traffic pattern information associated with the PDP links to a CSPG **(See pages 2-3 paragraph 24 and page 4 paragraph 33 for reference to the GGSN exchanging PDP context information regarding both the primary and secondary contexts with a charging gateway CGF, which is a type of CSPG)**. Jouppi et al. also discloses the traffic pattern information providing data associated with

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how traffic flows propagation via each of the PDP links are to be treated in the network **(See page 4 paragraph 33 of Jouppi et al. for reference to the GGSN exchanging information with the CGF regarding how each of the PDP contexts are to be treated for charging purposes)**. Jouppi et al. further discloses a GGSN being operable to relay traffic pattern information associated with the primary and secondary PDP links through one or more control path interfaces to a CSPG **(See page 4 paragraph 33 or Jouppi et al. for reference to GGSN relaying PDP context information through control path interfaces to the CGF)**. Jouppi et al. also discloses the CSPG being external to the GGSN and the traffic pattern information allowing the CSPG to provide an associated service **(See pages 2-3 paragraph 24, page 4 paragraph 33, and Figure 1 of Jouppi et al. for reference to the CGF being external to the GGSN and for reference to information provided by the GGSN to the CSPG allowing the CSPG to providing an associated charging service)**. While Jouppi et al. does disclose storing the traffic pattern information such that differentiated billing occurs based on each separate PDP context **(See page 4 paragraph 33 of Jouppi et al. for reference to the CGF storing information such that each of the separate PDP contexts are charged in a different way)**, Jouppi et al. does not specifically disclose the traffic pattern information specifying a first quality of service for the primary PDP link and a different second quality of service for the secondary PDP link by adding the traffic pattern information into traffic flows communicated through control path interfaces of the GGSN to the CSPG such that the CSPG provides as

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associated service according to an appropriate quality of service level determined from the traffic pattern information.

With respect to claims 14 and 18, Jouppi et al. discloses a system and software product for relaying information in a network environment **(See the abstract and page 6 paragraph 47 of Jouppi et al. for reference to subsystem for transmitting data flows in a network and for reference to the system being implemented as a computer program executed by a processor)**. Jouppi et al. also discloses a means for establishing primary and secondary PDP links on behalf of an end user **(See page 1 paragraph 2 and page 3 paragraph 26 of Jouppi et al. for reference to a GGSN establishing both primary and secondary PDP contexts)**. Jouppi et al. further discloses a means for communicating traffic pattern information associated with the PDP links **(See pages 2-3 paragraph 24 and page 4 paragraph 33 for reference to the GGSN exchanging PDP context information regarding both the primary and secondary contexts with a charging gateway CGF)**. Jouppi et al. also discloses the traffic pattern information providing data associated with how traffic flows propagation via each of the PDP links are to be treated in the network **(See page 4 paragraph 33 of Jouppi et al. for reference to the GGSN exchanging information with the CGF regarding how each of the PDP contexts are to be treated for charging purposes)**. Jouppi et al. further discloses a GGSN being operable to relay traffic pattern information associated with the primary and secondary PDP links through one or more control path interfaces to a CSPG **(See page 4 paragraph 33 of Jouppi et al. for reference to GGSN relaying PDP context information through control path**

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interfaces to the CGF). Jouppi et al. also discloses the CSPG being external to the GGSN and the traffic pattern information allowing the CSPG to provide an associated service **(See pages 2-3 paragraph 24, page 4 paragraph 33, and Figure 1 of Jouppi et al. for reference to the CGF being external to the GGSN and for reference to information provided by the GGSN to the CSPG allowing the CSPG to providing an associated charging service).** While Jouppi et al. does disclose storing the traffic pattern information such that differentiated billing occurs based on each separate PDP context **(See page 4 paragraph 33 of Jouppi et al. for reference to the CGF storing information such that each of the separate PDP contexts are charged in a different way),** Jouppi et al. does not specifically disclose the traffic pattern information specifying a first quality of service for the primary PDP link and a different second quality of service for the secondary PDP link by adding the traffic pattern information into traffic flows communicated through control path interfaces of the GGSN to the CSPG such that the CSPG provides as associated service according to an appropriate quality of service level determined from the traffic pattern information.

With respect to claims 22-26, Jouppi et al. discloses a table included within the CSPG that is operable to store the traffic pattern information such that it may be referenced by the CSPG **(See page 4 paragraph 33 of Jouppi et al. for reference to the CGF storing information such that each of the separate PDP contexts are charged in a different way).** Jouppi et al. does not specifically disclose the CSPG providing a selected quality of service for a selected one of the primary and secondary PDP links.

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With respect to claims 1, 6, 11, 14, 18, and 22-26, Lundin et al., in the field of communications, discloses the traffic pattern information specifying a first quality of service for a first PDP link and a different second quality of service for a second PDP link **(See page 2 paragraph 28 and page 3 paragraph 41 of Lundin et al. for reference to traffic type information being transmitted for different traffic flows including different traffic classifications, which are a qualities of service, for different flows)**. Lundin et al. also discloses adding the traffic pattern information into traffic flows communicated through control path interfaces of a GGSN to a CSPG **(See page 2 paragraph 28, page 3 paragraph 41, page3 paragraphs 43-44, and Figures 4 and 6 of Lundin et al. for reference to a GGSN adding the traffic type information to the GTP header of a downlink payload, which is a part of a traffic flow, and sending the traffic type information over a control path interface to a SGSN having a charging functionality, meaning the SGSN acts as a CSPG)**. Lundin et al. further discloses the CSPG providing as associated service according to an appropriate quality of service level determined from the traffic pattern information **(See page 2 paragraph 28 and page 3 paragraph 41 of Lundin et al. for reference to the SGSN providing a charging functionality, which is an associated service, according to the appropriate traffic classification determined from the traffic type information)**. Referencing traffic pattern information to provide different quality of service levels for different PDP links such that differentiated billing occurs based on the different quality of service levels has the advantage of allowing more flexible billing of customers.

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It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Lundin et al., to combine referencing traffic pattern information to provide different quality of service levels for different PDP links such that differentiated billing occurs based on the different quality of service levels, as suggested by Lundin et al., with the system and method of Jouppi et al., with the motivation being to allow more flexible billing of customers.

With respect to claims 3, 8, and 13, Jouppi et al. discloses using a RADIUS protocol **(See page 4 paragraph 33 of Jouppi et al. for reference to using RADIUS protocol to transmit information)**.

With respect to claims 4 and 9, Jouppi et al. discloses the SCPG providing billing services **(See page 4 paragraph 33 of Jouppi et al. for reference to the CGF providing charging services)**.

With respect to claims 5 and 10, Jouppi et al. discloses the traffic pattern information including a source IP address **(See page 3 paragraph 27 and page 4 paragraph 33 of Jouppi et al. for reference to using the interface identifier, which is part of the source address, to identify different PDP contexts)**.

With respect to claims 16 and 20, Jouppi et al. discloses a means for leveraging a communication protocol to deliver the traffic pattern information **(See page 4 paragraph 33 of Jouppi et al. for reference to using RADIUS protocol to transmit information)**.

With respect to claims 17 and 21, Jouppi et al. discloses a means for receiving the traffic pattern information and providing a service based on the traffic pattern

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information **(See page 4 paragraph 33 of Jouppi et al. for reference to the CGF providing charging services).**

Response to Arguments

5. Applicant's arguments filed 2/10/09 have been fully considered but they are not persuasive.

Regarding Applicant's argument that the combination of Jouppi et al. and Lundin et al. does not disclose the claim limitation stating "wherein the GGSN is operable to relay the traffic pattern information associated with primary and secondary PDP links through one or more control path interfaces of the GGSN to the CSPG", the Examiner respectfully disagrees. As shown in the rejections above, Jouppi et al. discloses a CGF collecting interface-specific charging information from a GGSN (See page 4 paragraph 33 of Jouppi et al.). Thus, the GGSN relays traffic pattern information (the interface-specific charging information) associated with PDP links to the CSPG (the CGF), as claimed. Although Jouppi et al. does not explicitly state that the interface-specific charging information is sent "through one or more control path interfaces of the GGSN", the interface-specific charging information must inherently be sent through a control path interface of the GGSN. Since the interface-specific charging information of Jouppi et al. is control data, and it is sent directly from an interface of the GGSN to an interface of the CGF (See Figure 1 of Jouppi et al. for reference to an direct interface connecting the GGSN and CGF), the interface of the GGSN on which interface-specific charging

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information is sent must be a control path interface, since it is used to send control data. Therefore, Jouppi et al. does disclose each of the above quoted claim limitations.

Regarding Applicant's argument that the combination of Jouppi et al. and Lundin et al. does not disclose the claim limitation stating "by adding traffic pattern information into traffic flows communicated through the one or more control path interfaces of the GGSN to the CSPG", the Examiner respectfully disagrees. As shown in the rejections and response to arguments above, Jouppi et al. does disclose the GGSN relaying traffic pattern information through control path interfaces of the GGSN to the CSPG. The only part of the above quoted limitation missing from the teachings of Jouppi et al. is the "adding traffic pattern information into traffic flows". Lundin et al. discloses a GGSN adding traffic type information to the GTP header of a downlink payload, which is a part of a traffic flow, and sending the traffic type information to a SGSN which uses the traffic type information as a part of a charging functionality (See page 2 paragraph 28, page 3 paragraph 41, page 3 paragraphs 43-44, and Figures 4 and 6 of Lundin et al.). Thus, Lundin et al. discloses adding traffic pattern information (traffic type information) into traffic flows communicated from a GGSN to a CSPG (the SGSN of Lundin et al. which acts as a CSPG containing the same charging functionality as the CGF of Jouppi et al.), as claimed. Therefore the rejections above are based on a combination of the system and method of relay the traffic pattern information between a GGSN and CGF, as disclosed by Jouppi et al., with the system and method of adding traffic pattern information into traffic flows communicated between a GGSN and SGSN, as disclosed by Lundin et al. Further the CGF of Jouppi et al. and the SGSN of Lundin et al. both

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perform the same function of charging, and are thus both similar types of CSPGs, as claimed.

Regarding Applicant's argument that an adequate reason for combining the teachings of Lundin et al. with the system and method of Jouppi et al. has not been provided, the Examiner respectfully disagrees. The rejections above state that the motivation to combine the teachings of Lundin et al. with the system and method of Jouppi et al. is "to allow more flexible billing of customers". By having a GGSN adding traffic type information to the header of packets, the system and method of Lundin et al. is able to more easily determine the exact type of each packet transmitted. This allows more flexible charging schemes to be implemented since charging may then be based on the traffic type of each packet, as indicated in the added header information (See the abstract of Lundin et al. for reference to this advantage). Thus, the advantage of allowing "more flexible billing of customers" is explicitly disclosed by the teachings of Lundin et al. By using the technique disclosed by Lundin et al. with the system and method of Jouppi et al. the same advantage (allowing the traffic type of each packet to be used to provide more flexible billing) is provided to the system and method of Jouppi et al. Therefore, there is adequate reason to combine the teachings of Lundin et al. with the system and method of Jouppi et al.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON E. MATTIS whose telephone number is (571)272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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